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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,665	02/20/2002	Tejas B. Desai	60,426-381	7063

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY LAW DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

BROWN, VERNAL U

ART UNIT	PAPER NUMBER
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2635

DATE MAILED: 03/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/079,665

Applicant(s)

TEJAS B. DESAI

Examiner

Vernal U Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The application of Desai et al. for Combined Tire Pressure Monitoring and Keyless Entry Receiver filed 2/20/2002 has been examined. Claims 1-33 are pending.

Claim Objections

Claims 1 and 24 are objected to because of the following informalities: The phrases “transmission single” in claim 1 and “wake up single” in claim 24 are objected to. It is suggested that the word “single” be replaced with the word “signal”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 28, the term “data indicative of a turn of the motor vehicle from the motor vehicle system” is not understood.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 19-22 and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by
Ghabra et al. U.S Patent 6650236.

Regarding claims 19-20, Ghabra et al. teaches a receiver assembly (34) for receiving signals indicative of tire conditions for a tire pressure monitoring system and signals initiating activation of a specific function for a remote keyless entry system (col. 6 lines 39-46) comprising;
an amplitude shift keyed receiver (col. 5 lines 22-23); a frequency shift keyed receiver (col. 4 lines 58-66). Ghabra et al. also teaches the receiver receives incoming signals in response to the triggering event of speed (col. 4 lines 36-47).

Regarding claim 21, Ghabra et al. teaches the tire pressure monitoring system includes a sensor assembly, the sensor assembly including a transmitter emitting the signal indicative of tire conditions, said signal is a frequency shift keyed transmission (col. 4 lines 63-65).

Regarding claim 22, Ghabra et al. teaches a remote keyless entry system includes a remote transmitter (20), said remote transmitter emitting an amplitude shift keyed transmission (col. 5 lines 22-23).

Regarding claims 30-31, Ghabra et al. teaches a receiver receiving amplitude shift (col. 5 lines 22-23) and frequency shift keyed signal (col. 4 lines 58-66) from the vehicle activation system and the tire monitoring system (col. 5 line 66-col. 6 line 3). Ghabra et al. also teaches

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using the same integrated circuit for detecting the amplitude and frequency shift keying signal (col. 6 lines 57-59) which includes switching from one receive signal to another.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, 4-7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez et al. U.S Patent 5463374 in view of Ghabra et al. U.S Patent 6650236.

Regarding claims 1 and 4, Mendez et al. teaches a system for monitoring conditions within a tire comprising; a sensor assembly disposed within each tire of a motor vehicle (col. 3 lines 26-30, a transmitter (14) in communication with the sensor assembly to transmit signals indicative of current tire conditions (col. 3 lines 30-32); a remote transmitter for actuating a remote keyless entry system (col. 3 lines 35-40); a receiver assembly for receiving said signal indicative of said current tire conditions and said signal to actuate a function from said remote transmitter and signal indicative of said tire conditions is different than said signal to actuate a function of said remote keyless entry system(col. 3 lines 39-41). Mendez et al. teaches modulating the transmitted signal but is silent on teaching (col. 4 lines 46-48) but is silent on

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teaching the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal. Ghabra et al. in an art related tire monitoring and keyless entry system teaches the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency (col. 4 lines 58-66) and amplitude shift keyed signal (col. 5 lines 22-23)..

It would have been obvious to one of ordinary skill in the art for the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal in Mendez et al. as evidenced by Ghabra et al. because Mendez et al. suggests a combine tire monitoring and keyless entry system and Ghabra et al. teaches the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal.

Regarding claim 5, Mendez et al. teaches the use of speed as a triggering event (col. 4 lines 7-10).

Regarding claims 6-7, Mendez et al. teaches the receiver is engaged to receive signal relating to the tire at speed above certain threshold (col. 4 lines 7-12) and teaches a switch (44) actuated when the tire reaches a certain speed (col. 4 lines 7-9). Mendez et al. teaches

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modulating the transmitted (col. 4 lines 46-48) but is silent on teaching the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal. Ghabra et al. in an art related tire monitoring and keyless entry system teaches the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal (col. 4 lines 58-66).

It would have been obvious to one of ordinary skill in the art for the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal in Mendez et al. as evidenced by Ghabra et al. because Mendez et al. suggests a combine tire monitoring and keyless entry system and Ghabra et al. teaches the transmitter in communication with the sensor in the tire transmits a frequency shift keyed signal and the remote transmitter for actuating the remote keyless entry system emit amplitude shift keyed signal and the receiver receives the frequency and amplitude shift keyed signal.

Regarding claim 15, Mendez et al. teaches a system for monitoring conditions within a tire (col. 3 lines 26-35) but is silent on teaching the sensor assembly includes a temperature sensor. c in an art related tire monitoring and keyless entry system teaches the monitoring the parameter relating to the tire which includes temperature (col. 7 lines 10-12).

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It would have been obvious to one of ordinary skill in the art for the sensor assembly to include a temperature sensor in Mendez et al. as evidenced by Ghabra et al. because Mendez et al. suggests a system for monitoring conditions within a tire and Ghabra et al. teaches monitoring the parameter relating to the tire which includes temperature in order to warn the driver of any abnormal situation.

Claims 8-10 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez et al. U.S Patent 5463374 in view of Ghabra et al. U.S Patent 6650236 and further in view of McClelland U.S Patent 5963128.

Regarding claims 8-10, Mendez et al. in view of Ghabra et al. teaches the transmitter send signal at regular intervals (col. 4 lines 10-13) but is silent on teaching the interval varies in response to the speed and the interval is greater at speeds above said predetermined speed threshold than below said predetermined speed threshold. McClelland in an art related remote tire pressure monitoring system teaches the interval varies in response to the speed and the interval is greater at speeds above said predetermined speed threshold than below said predetermined speed threshold (col. 6 lines 1-25). McClelland also teaches interval increases in response to variation of pressure within one of the tires (col. 5 lines 50-65).

It would have been obvious to one of ordinary skill in the art to vary the interval in response to the speed and the interval is greater at speeds above said predetermined speed

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threshold than below said predetermined speed threshold in Mendez et al. in view of Ghabra et al. as evidenced by McClelland because Mendez et al. in view of Ghabra et al. teaches the transmitter send signal indicating the monitored status of the tire at regular intervals and McClelland teaches the interval varies in response to the speed and the interval is greater at speeds above said predetermined speed threshold than below said predetermined speed threshold in order to increase the monitoring of the tire at higher speed. McClelland also teaches interval increases in response to variation of pressure within one of the tires in order to quickly warn the driver of an abnormal change in tire pressure.

Regarding claim 11-13, Mendez et al. teaches the transmitter send signal to the receiver indicating the status of the tire (col. 4 lines 10-13) and Ghabra et al. teaches amplitude shift keyed receiver for receiving transmission (col. 4 lines 58-66) but is silent on teaching a plurality of data frames sent at random time intervals to prevent repeated overlap of transmissions from two or more of said sensor assemblies. McClelland in an art related remote tire pressure monitoring system teaches a plurality of data frames sent at random time intervals to prevent repeated overlap of transmissions from two or more of said sensor assemblies (col. 5 lines 18-40).

It would have been obvious to one of ordinary skill in the art to have a plurality of data frames sent at random time intervals to prevent repeated overlap of transmissions from two or more of said sensor assemblies in Mendez et al. in view of Ghabra et al. as evidenced by McClelland because Mendez et al. in view of Ghabra et al. suggests the transmitter send signal to the receiver indicating the status of the tire and McClelland in an art related remote tire pressure

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monitoring system teaches a plurality of data frames sent at random time intervals to prevent repeated overlap of transmissions from two or more of said sensor assemblies.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez et al. U.S. Patent 5463374 in view of Ghabra et al. U.S. Patent 6650236 and further in view of Thomas et al. U.S. Patent 4734674.

Regarding claim 14, Mendez et al. in view of Ghabra et al. teaches a monitor mounted in the valve stem of the tire (col. 4 lines 41-43, U.S. Patent 6650236) but is silent on teaching a valve stem lockable at a desired pivoted position. Thomas et al. in an art related tire pressure warning system teaches a valve stem lockable at a desired pivoted position (col. 9 lines 16-22).

It would have been obvious to one of ordinary skill in the art to have a valve stem lockable at a desired pivoted position in Mendez et al. in view of Ghabra et al. as evidenced by Thomas et al. because Mendez et al. in view of Ghabra et al. suggests a monitor mounted in the valve stem of the tire and Thomas et al. teaches a valve stem lockable at a desired pivoted position in order to prevent unauthorized or accidental removal of the tire monitor.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez et al. U.S. Patent 5463374 in view of Ghabra et al. U.S. Patent 6650236 and further in view of Robillard et al. U.S. Patent 6259361.

Regarding claim 16, Mendez et al. in view of Ghabra teaches detecting the speed of the vehicle (col. 4 lines 7-10) but is silent on teaching the sensor assembly includes an

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accelerometer. Robillard et al. in an art related tire monitoring system teaches the sensor assembly includes an accelerometer in order to detect the change in speed of the vehicle.

It would have been obvious to one of ordinary skill in the art to for the sensor assembly to includes an accelerometer in Mendez et al. in view of Ghabra et al. as evidenced by Robillard et al. because Mendez et al. in view of Ghabra et al. suggests detecting the speed of the vehicle and Robillard et al. teaches the sensor assembly includes an accelerometer in order to detect the change in speed of the vehicle.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mendez et al. U.S Patent 5463374 in view of Ghabra et al. U.S Patent 6650236 in view of Stewart et al. U.S Patent 6043738 and further in view of Walker et al. U.S Patent 5192929.

Regarding claims 17-18, Mendez et al. in view of Ghabra et al. teaches a system for monitoring conditions within a tire (col. 3 lines 26-35) but is silent on teaching a learning mode for discerning between signals from sensor assemblies disposed on other motor vehicles; said learning mode compares an acceleration value obtained from said sensor assembly with a vehicle acceleration value to distinguish between sensor assemblies disposed on another motor vehicle. Stewart et al. in an art related tire monitoring system teaches a learning mode for discerning between signals from sensor assemblies disposed on other motor vehicles (col. 3 lines 41-60) but is also silent on teaching the learning mode compares an acceleration value obtained from said sensor assembly with a vehicle acceleration value to distinguish between sensor assemblies disposed on another motor vehicle. Walker et al. in an art related tire monitoring system teaches comparing the acceleration value obtained from the sensor assembly with a vehicle acceleration

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value to distinguish between sensor assemblies disposed on another motor vehicle and discerning the specific position of the tire on the vehicle (col. 3 lines 25-35).

It would have been obvious to one of ordinary skill in the art to have a learning mode for discerning between signals from sensor assemblies disposed on other motor vehicles; said learning mode compares an acceleration value obtained from said sensor assembly with a vehicle acceleration value to distinguish between sensor assemblies disposed on another motor vehicle in Mendez et al. in view of Ghabra et al. as evidenced by Stewart et al. in view of Walker et al. because Mendez et al. in view of Ghabra et al. suggests a system for monitoring conditions within a tire and Stewart et al. in view of Walker et al. teaches a system for monitoring a tire which includes a learning mode for discerning between signals from sensor assemblies disposed on other motor vehicles and other vehicles.

Claims 23-24 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ghabra et al. U.S Patent 6650236 in view of Mendez et al. U.S Patent 5463374.

Regarding claims 23-24 and 32-33, Ghabra et al. teaches monitoring the speed of the vehicle (col. 4 lines 36-47) but is silent on teaching receiver is engaged to receive incoming signals for speeds below a predetermined speed threshold of said motor vehicle and said frequency shift keyed receiver is engaged to receive incoming signals for speeds above said predetermined speed threshold. Mendez et al. in an art related tire monitoring invention teaches the receiver is engaged to receive signal relating to the tire at speed above certain threshold (col. 4 lines 7-12) and teaches a switch (44) actuated when the tire reaches a certain speed (col. 4 lines 7-9).

It would have been obvious to one of ordinary skill in the art for the receiver to receive incoming signals for speeds below a predetermined speed threshold of said motor vehicle and said frequency shift keyed receiver is engaged to receive incoming signals for speeds above said predetermined speed threshold in Ghabra et al. as evidenced by Mendez et al. because Ghabra et al. teaches monitoring the speed of the vehicle and Mendez et al. teaches the receiver is engaged to receive signal relating to the tire at speed above certain threshold and teaches a switch actuated when the tire reaches a certain speed.

Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. U.S Patent 6043738 in view of Weinzerl et al. U.S Patent 5357798.

Regarding claims 25 and 27, Stewart et al. teaches a method of determining a position of sensor assemblies for a tire pressure monitoring system of a motor vehicle and recording the sensor assembly identification code (col. 3 lines 36-40) and also teaches the use of speed of the vehicle to discriminate the transmission from other vehicles (col. 3 lines 61-67) but is silent on teaching the method of determining the position of the sensor comprising transmitting a signal indicative of tire acceleration to a receiver assembly, obtaining data indicative of motor vehicle speed from a vehicle system, comparing the signal indicative of tire acceleration with the data indicative of motor vehicle acceleration and recording the sensor assembly identification code in response to the signal indicative of tire acceleration being substantially equal to the data indicative of motor vehicle acceleration. Weinzerl et al. in an art related invention of vehicle safety devices teaches the use of the comparison between the acceleration calculated from the rotational wheels speed with the acceleration measured by the vehicle as a suitable control means (col. 2 lines 7-11).

It would have been obvious to one of ordinary skill in the art to the position of the sensor comprising transmitting a signal indicative of tire acceleration to a receiver assembly, obtaining data indicative of motor vehicle speed from a vehicle system, comparing the signal indicative of tire acceleration with the data indicative of motor vehicle acceleration and recording the sensor assembly identification code in response to the signal indicative of tire acceleration being substantially equal to the data indicative of motor vehicle acceleration in Stewart et al. as evidenced by Weinzerl et al. because Stewart et al. teaches a method of determining a position of sensor assemblies for a tire pressure monitoring system and the use of speed of the vehicle to discriminate the transmission from other vehicles and Weinzerl et al. teaches the use of the comparison between the acceleration calculated from the rotational wheels speed with the acceleration measured by the vehicle as a suitable control and identifying means.

Claims 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. U.S Patent 6043738 in view of Weinzerl et al. U.S Patent 5357798 and further in view of Niekerk et al. U.S patent 6463798.

Regarding claim 26, Stewart et al. in view of Weinzerl et al. teaches a method of determining the position of sensor assemblies for a tire pressure monitoring system of a motor vehicle and recording the sensor assembly identification code (col. 3 lines 36-40) but is silent on teaching of relearning the sensor assembly position in response to the motor vehicle remaining stationary for a predetermined period of time. Niekerk et al. in an art related tire monitoring

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system teaches the tire monitoring system enters a relearn mode when the vehicle is started (col. 4 lines 37-40).

It would have been obvious to one of ordinary skill in the art to relearning the sensor assembly position in response to the motor vehicle remaining stationary for a predetermined period of time in Stewart et al. in view of Weinzerl et al. as evidenced by Niekerk et al. because Stewart et al. in view of Weinzerl et al. suggests learning the position of sensor assemblies for a tire pressure monitoring system of a motor vehicle and Niekerk et al. teaches the tire monitoring system enters a relearn mode when the vehicle is started and the vehicle is started in the stationary mode.

Regarding claim 29, Stewart et al. in view of Weinzerl et al. teaches a method of determining the position of sensor assemblies for a tire pressure monitoring system of a motor vehicle and recording the sensor assembly identification code (col. 3 lines 36-40) but is silent on teaching measuring signal strength to determine the position of said sensor assembly. Niekerk et al. in an art related tire monitoring system teaches measuring signal strength to determine the position of said sensor assembly (col. 16 lines 64-65).

It would have been obvious to one of ordinary skill in the art to measuring signal strength to determine the position of said sensor assembly in Stewart et al. in view of Weinzerl et al. as evidenced by Niekerk et al. because Stewart et al. in view of Weinzerl et al. suggests determining the position of sensor assemblies for a tire pressure monitoring system and Niekerk et al. teaches determine the position of said sensor assembly by detecting the signal strength.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U Brown whose telephone number is 703-305-3864. The examiner can normally be reached on M-Th, 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.



Vernal Brown
March 16, 2004

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
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